Index of Claims



Application/Control No.

09/898,185 Examiner

Jean E. Lesperance

Applicant(s)/Patent under Reexamination

KUMADA ET AL.

Art Unit

2629

| √  | Rejected | 1 | (Through numeral)<br>Cancelled | N | Non-Elected  | : | A | Appeal   |
|----|----------|---|--------------------------------|---|--------------|---|---|----------|
| 11 | Allowed  | ÷ | Restricted                     | 1 | Interference |   | 0 | Objected |

| Cla  | Claim Date |          |                 |   |          |  |              | Clai   | m               | Date     |          |              |          |                 |          |                 |          | 7        | CI       | Date     |          |          |               |          |          |          |                      |                 |          |          |          |          |          |
|--|------------|----------|-----------------|---|----------|--|--------------|--|-----------------|----------|----------|--------------|----------|-----------------|----------|-----------------|----------|----------|----------|----------|----------|----------|---------------|----------|----------|----------|----------------------|-----------------|----------|----------|----------|----------|----------|
|  |            |          |                 |   |          |  | T            |  |                 |          |          |              |          | П               |          |                 |          |          |          |          |          | 1        |               |          |          |          |                      |                 |          |          |          | $\Box$   | $\Box$   |
| ਜ਼   | Original   | 9/21/06  |                 |   |          |  | ŀ            |  |                 |          | 7        | 5            | Original |                 |          |                 |          |          |          | i        |          |          | <u>~</u>      | Original |          |          |                      |                 |          |          |          |          | .        |
| Final  | <u>:</u> g | 212      |                 |   |          |  |              |  |                 |          | i i      | •            | iĝ       |                 |          |                 |          |          | -        |          |          |          | Final         | ġ        |          |          |                      |                 |          |          |          | ļ        |          |
| _  | Õ          | 9        |                 |   |          |  |              |  | H               |          | "        | •            | ō        |                 |          |                 |          |          | -        |          |          |          | -             | Ō        |          |          |                      |                 |          |          |          |          |          |
| 1  | 1          | =        | _               |   | _        | <del>                                     </del> | ╁            | -  | Н               |          | -        | +            | 51       | $\vdash$        | $\dashv$ | _               | -        | $\dashv$ | $\dashv$ | $\dashv$ | +        | -        | -             | 101      |          |          | Н                    | Н               | _        |          | -        | -        | $\dashv$ |
| 1  |            | -        | $\vdash$        | _ | -        | ├  | ├            | $\vdash$   | $\vdash$        |          | -        | $\dashv$     | 52       | $\vdash$        | $\dashv$ | _               | -        | $\dashv$ | $\dashv$ | $\dashv$ | -        | ┥        |               |          |          |          | $\vdash\vdash$       | Н               | _        | -        | -        | -        | $\dashv$ |
| 2  | 2          | =        | _               |   | <u> </u> | ├-   | ╙            | 1  | Н               | _        | <u> </u> |              |          |                 | $\dashv$ |                 |          | $\dashv$ | $\dashv$ | -        | -        | 4        |               | 102      |          |          | $\vdash$             | $\vdash$        | _        | -        |          |          | _        |
| 3  | 3          | =        |                 |   |          | <u> </u>   | <u> </u>     | 1  | Ш               | _        | $\vdash$ | 4            | 53       |                 |          |                 | $\dashv$ | -        | -        | _        |          | 4        |               | 103      | _        | _        | <u> </u>             | Ш               |          | Ш        | $\Box$   | $\dashv$ | _        |
| 4  | 4          | =        | ļ.,             |   |          | <u> </u>   | <u> </u>     | <u> </u>   | Ш               | _        | <u> </u> | 4            | 54       |                 |          |                 |          | _        | 4        | 4        | _        | 4        | <u> </u>      | 104      |          |          |                      | Ш               |          |          | $\Box$   | _        |          |
|  | 5          | -        | Щ               |   |          | <u> </u>   | <u> </u>     | <u> </u>   | Щ               | _        |          | 4            | 55       |                 | _        |                 |          | _        | 4        | _        | _  _     | 4        |               | 105      |          |          | Ш                    | Ш               |          |          | $\Box$   | _        |          |
| 5  | 6          | =        |                 |   | L        | <u> </u>   | <u> </u>     | L  | Ш               | _        | L        | $\perp$      | 56       | Ш               |          |                 |          |          | $\perp$  |          |          | ╛        |               | 106      |          |          | Ш                    |                 |          |          |          |          |          |
| 6  | 7          | Ξ        |                 |   |          |  |              |  | Ш               |          | L        |              | 57       |                 |          |                 |          |          |          |          |          | ╛        |               | 107      |          |          | Ш                    | Ш               |          |          |          |          |          |
| 7  | 8          | =        |                 |   |          |  |              |  |                 |          |          |              | 58       |                 |          |                 |          |          |          |          |          | _]       | 1             | 108      |          |          |                      |                 |          |          |          |          |          |
| 8  | 9          | =        |                 |   |          |  |              |  |                 |          |          |              | 59       |                 |          |                 |          |          |          |          |          | 7        |               | 109      |          |          |                      |                 |          |          |          |          |          |
| 9  | 10         | =        |                 |   |          |  | П            |  |                 | $\neg$   |          |              | 60       |                 |          |                 |          |          |          |          |          | 1        |               | 110      |          |          |                      |                 |          |          |          |          |          |
| 10   | 11         | =        |                 |   |          | Г  |              |  | П               | $\neg$   |          |              | 61       |                 |          |                 |          |          |          |          |          | 7        |               | 111      |          |          | П                    |                 |          |          |          | $\neg$   | $\Box$   |
| 11   | 12         | =        | П               |   |          |  | T            |  | H               | $\neg$   |          | 十            | 62       |                 |          |                 |          | 寸        | $\top$   | _        |          | 1        |               | 112      |          |          | $\Box$               | $\sqcap$        |          |          | 一        | 寸        | $\neg$   |
|  | 13         | -        |                 |   |          |  |              | Т  |                 | $\dashv$ |          |              | 63       | $\vdash$        |          | _               | $\neg$   | $\dashv$ | $\dashv$ | $\dashv$ | $\dashv$ | 1        |               | 113      |          |          | Н                    | $\sqcap$        |          | Н        | $\vdash$ | $\dashv$ | $\neg$   |
| 12   | 14         | =        | Н               |   | $\vdash$ | $\vdash$   | $\vdash$     | $\vdash$   | $\vdash \vdash$ | $\dashv$ | -        |              | 64       |                 | _        | -               |          | +        | $\dashv$ | ╅        | +        | 1        |               | 114      |          |          | Н                    | $\vdash$        |          | H        | H        | $\dashv$ | -        |
| 13   | 15         | Ē        | $\vdash$        | _ | -        | <del>                                     </del> | 1-           | <del>                                     </del> | $\vdash$        | $\dashv$ | -        | +            | 65       | $\vdash$        | $\dashv$ | $\dashv$        | $\dashv$ | $\dashv$ | $\dashv$ | $\dashv$ |          | ┨        | -             | 115      | $\vdash$ | _        | Н                    | $\vdash$        | -        | H        | $\dashv$ |          |          |
| 14   | 16         | =        | Н               |   | ┢        | <del> </del>                                     | ├            | +  | $\vdash \vdash$ | $\dashv$ | -        |              | 66       | $\vdash \vdash$ | $\dashv$ | $\dashv$        | -        | +        | $\dashv$ | +        |          | -        |               | 116      | Н        |          | Н                    | $\vdash \vdash$ |          | $\vdash$ | $\dashv$ | $\dashv$ |          |
| 15   | 17         | =        | $\vdash$        |   | $\vdash$ | <del>                                     </del> | ₩            | -  | $\vdash$        |          |          | +            | 67       | $\vdash$        | -        | $\dashv$        |          | $\dashv$ | $\dashv$ | +        | +-       | -        |               | 117      | $\vdash$ |          | $\vdash\vdash\vdash$ | $\vdash$        | _        | $\vdash$ | $\dashv$ | $\dashv$ | $\dashv$ |
|  |            | -        | Н               | _ | $\vdash$ | <u> </u>   | ├            | -  |                 |          |          |              |          | $\vdash$        | -        |                 |          |          |          | -        | -        | 4        | -             | 117      |          |          | Щ                    | $\vdash \vdash$ |          |          | $\vdash$ | $\dashv$ |          |
| 16   | 18         | =        | $\vdash$        |   | _        | <u> </u>   | <u> </u>     | <del>  -  </del>                                 |                 | —        |          |              | 68       | $\vdash$        |          |                 | _        | -        |          | -        |          | 4        |               | 118      |          |          | ш                    | Ш               |          |          | $\vdash$ |          |          |
| 17   | 19         | =        |                 |   | _        | _  | _            |  | Н               |          |          |              | 69       | -               | $\dashv$ | _               | _        | _        | _        | $\dashv$ | _        | 4        |               | 119      | Щ        |          | Ш                    | Ш               | _        |          | Ш        | _        | _        |
| 18   | 20         | =        |                 |   | L        |  |              | L  | Ш               | _        |          | $\downarrow$ | 70       |                 | _        |                 | _        | _        | _        | $\perp$  |          |          |               | 120      |          |          | Ш                    |                 |          |          |          |          |          |
| 19   | 21         | =        | Ш               |   |          | _  | <u> </u>     | ┖  |                 | _        |          |              | 71       |                 |          |                 |          |          |          | $\perp$  |          |          |               | 121      |          |          | Ш                    |                 |          |          | Ш        | $\Box$   | _        |
|  | 22         | <u> </u> |                 |   |          |  |              | L  |                 | _        | L        | $\perp$      | 72       | $\Box$          | $ \bot $ |                 |          |          |          | $\perp$  |          |          |               | 122      |          |          | Ш                    | Ш               |          |          |          |          |          |
| 20   | 23         | <u> </u> |                 |   |          | L  |              |  |                 | ╝        | <u> </u> |              | 73       |                 |          |                 |          |          |          |          |          |          |               | 123      |          |          | Ш                    |                 |          |          |          |          |          |
| 21   | 24         | =        |                 |   |          |  |              |  |                 |          |          |              | 74       | 1               |          |                 |          | $\neg$   |          | П        |          | 7        |               | 124      |          |          |                      | П               |          |          |          | П        |          |
| 22   | 25         | =        |                 |   |          | Γ  |              |  |                 |          |          | T            | 75       |                 |          |                 |          |          |          | П        |          |          |               | 125      |          |          | П                    | П               |          |          |          |          |          |
| 23   | 26         | =        |                 |   |          |  |              |  |                 |          |          |              | 76       |                 | 一        |                 |          | $\neg$   |          | T        |          | 1        |               | 126      |          |          |                      |                 |          |          |          |          |          |
| 24   | 27         | =        |                 |   |          |  | П            |  | $\neg$          |          |          |              | 77       |                 |          |                 |          |          | _        | 寸        |          | 1        |               | 127      |          |          |                      | $\Box$          |          |          |          | ヿ        | $\neg$   |
| 25   | 28         | =        |                 |   |          | <u> </u>   |              |  | П               |          |          |              | 78       |                 | $\neg$   | _               |          | $\dashv$ | $\top$   | 十        | $\dashv$ | 1        |               | 128      |          | $\neg$   | $\Box$               | $\Box$          |          |          | $\dashv$ | $\dashv$ | $\neg$   |
| 26   | 29         | =        |                 |   | _        | $\vdash$   | _            | t  | H               |          |          |              | 79       | $\dashv$        | $\neg$   |                 | _        | $\dashv$ | _        | $\dashv$ | _        | 1        |               | 129      | $\Box$   | _        |                      |                 |          | $\dashv$ | $\neg$   | $\dashv$ | $\dashv$ |
| 27   | 30         | =        | $\vdash$        | _ | _        | _  | $\vdash$     | H  | $\vdash$        | $\dashv$ | $\vdash$ |              | 80       |                 | -        | -               | $\dashv$ | $\dashv$ | 1        | $\dashv$ | +        | 1        |               | 130      | Н        | -        | $\vdash$             | $\vdash$        |          | -        | $\neg$   | $\dashv$ | ᅱ        |
|  | 31         | _        | $\dashv$        |   | -        | $\vdash$   | $\vdash$     | H  | $\vdash$        | $\dashv$ | $\vdash$ |              | 81       | -               | $\dashv$ | $\dashv$        | $\dashv$ | $\dashv$ | +        | $\dashv$ | +-       | ┨        |               | 131      |          | -        | $\vdash$             | $\vdash$        |          |          |          | $\dashv$ | $\dashv$ |
| <del>                                     </del> | 32         | -        | $\vdash$        |   |          | $\vdash$   | <del> </del> | $\vdash$   | $\vdash$        | $\dashv$ | -        | +            | 82       | $\dashv$        |          | $\dashv$        |          | -+       | +        | +        | +        | $\dashv$ |               | 132      | -        | $\dashv$ | $\dashv$             | Н               | $\vdash$ | $\dashv$ | $\dashv$ | $\dashv$ | $\dashv$ |
| $\vdash$   | 33         | $\vdash$ | Н               |   |          | $\vdash$   | <del> </del> | $\vdash$   | $\dashv$        | -        | -        |              | 83       | -               | $\dashv$ | $\dashv$        | $\dashv$ | +        | +        | +        |          | -        |               |          | $\dashv$ | $\dashv$ | -                    | $\vdash$        | $\vdash$ |          |          | $\dashv$ | $\dashv$ |
| <b>—</b>   | 34         | -        | $\vdash$        |   | _        | $\vdash$   | -            | $\vdash$   | $\mapsto$       |          | -        | +            | 03       | $\dashv$        | -        |                 | -        | +        | +        | +        |          | 4        |               | 133      | $\vdash$ | _        |                      | $\vdash \vdash$ |          |          |          | $\dashv$ | $\dashv$ |
| $\vdash$   |            | <b>-</b> | Н               |   |          | <u> </u>   | <del> </del> | -  | $\dashv$        | {        | $\vdash$ | +            | 84       | -               | $\dashv$ |                 |          | -        | -        | -        | +        | 4        | <u> </u>      | 134      | $\dashv$ | _        | $\vdash$             | $\vdash \vdash$ |          | $\dashv$ | _        | $\dashv$ | $\dashv$ |
| <u> </u>   | 35         | <u> </u> | $\vdash \vdash$ | _ |          | ├-   | -            | -  |                 |          | -        |              | 85       |                 |          |                 | _        |          | 4        | +        |          | 4        | <u></u>       | 135      |          |          |                      | $\vdash \vdash$ |          | _        |          | $\dashv$ | $\dashv$ |
| ļ,   | 36         | <u> </u> |                 | _ |          | <u> </u>   | <u> </u>     | <u> </u>   | <u> </u>        |          | <u> </u> | $\perp$      | 86       | $\sqcup$        | _        |                 | _        | _        | 4        | 4        |          | 4        | $\vdash$      | 136      |          |          | Щ                    | Щ               |          | _        |          | $\dashv$ | 凵        |
| <u> </u>   | 37         | L_       |                 |   |          | L  |              | Ш  |                 | _        | <u> </u> |              | 87       | $\sqcup$        |          |                 |          |          | $\perp$  |          |          | 4        | Ш             | 137      |          |          |                      | Ш               |          |          |          |          |          |
|  | 38         |          |                 |   |          | L  | L            | Ш  |                 | $\Box$   | <u> </u> |              | 88       |                 |          |                 | l        |          |          |          |          |          |               | 138      |          |          | $oxed{oxed}$         | Ш               |          |          |          |          |          |
|  | 39         |          |                 |   |          |  |              |  |                 | ╝        | L        |              | 89       |                 |          | ]               | I        | $\Box$   |          | $\Box$   |          |          |               | 139      |          |          |                      |                 |          |          | T        | $\Box$   | _]       |
|  | 40         |          |                 |   |          |  |              |  |                 | _]       |          |              | 90       |                 |          |                 |          |          | T        |          |          |          |               | 140      |          |          |                      |                 |          |          |          | $\Box$   | $\Box$   |
|  | 41         |          |                 |   |          |  |              |  | $\Box$          | $\neg$   |          | $\top$       | 91       | $\Box$          | $\Box$   |                 | $\neg$   | $\neg$   | $\neg$   |          |          | 1        |               | 141      |          |          | $\Box$               | $\Box$          |          |          | $\neg$   | $\dashv$ | ヿ        |
|  | 42         |          |                 |   |          |  |              | П  |                 | $\neg$   |          |              | 92       | $\dashv$        | 寸        | $\neg \uparrow$ | 一        | $\dashv$ | $\top$   | $\top$   |          | 1        |               | 142      |          |          |                      | $\sqcap$        |          |          |          | $\dashv$ | $\dashv$ |
|  | 43         |          | $\Box$          |   |          | П  |              | П  |                 | $\dashv$ |          | +            | 93       | $\dashv$        | 一        |                 | $\dashv$ | _        | $\dashv$ | $\top$   | $\top$   | 1        |               | 143      | $\dashv$ | $\neg$   | $\dashv$             | $\sqcap$        | $\vdash$ |          | $\dashv$ | $\dashv$ | $\dashv$ |
| $\vdash$   | 44         | Т        |                 |   |          |  |              | Н  |                 | ᅱ        | <u> </u> |              | 94       | $\dashv$        | $\dashv$ |                 | $\dashv$ | $\dashv$ | $\dashv$ | $\dashv$ | $\dashv$ | 1        | $\vdash$      | 144      | $\dashv$ | $\neg$   | $\neg$               | $\dashv$        |          | -        | -        | $\dashv$ | $\dashv$ |
|  | 45         | Н        |                 |   |          | $\vdash$   | $\vdash$     | Н  | -               | ᅱ        | $\vdash$ |              | 95       | $\dashv$        | $\dashv$ | -               | $\dashv$ | $\dashv$ | $\dashv$ | $\dashv$ | +        | 1        | $\vdash$      | 145      |          |          | $\dashv$             | $\vdash \vdash$ |          |          | $\dashv$ | $\dashv$ | $\dashv$ |
| -  | 46         | -        | $\vdash$        | - | $\vdash$ | -  | $\vdash$     | $\vdash$   | $\dashv$        | $\dashv$ | -        | +            | 96       |                 | $\dashv$ |                 | -        | +        | +        | +        | +        | 4        |               | 146      | -        | -        | $\dashv$             | $\vdash$        | -        | -i       | $\dashv$ | $\dashv$ | $\dashv$ |
|  | 47         | $\vdash$ | $\dashv$        | - |          | $\vdash$   | $\vdash$     | $\vdash$   | $\dashv$        | $\dashv$ | -        |              | 96       | -               | $\dashv$ | -               | $\dashv$ | -        | $\dashv$ | -+       |          | -        | $\vdash$      |          |          | -        | $\dashv$             | $\vdash \vdash$ | $\dashv$ |          | -+       | $\dashv$ | $\dashv$ |
|  | 48         | H        |                 |   |          | $\vdash$   | $\vdash$     | Н  | $\vdash$        | 4        |          |              |          | $\dashv$        | $\dashv$ | 4               | -        |          | -        | -        |          | -        | -             | 147      | _        | _        | $\dashv$             | $\vdash \vdash$ | _        | _        | _        | $\dashv$ | _        |
| $\vdash\vdash$                                   |            |          |                 | _ | Щ        | <del> </del>                                     | $\vdash$     | Н  | $\vdash$        | 4        |          |              | 98       | $\dashv$        | -        | 4               |          | _        | $\dashv$ | $\perp$  |          | -        | $\vdash$      | 148      |          | _        | $\dashv$             | $\vdash \vdash$ |          |          | _        | _        | ᅬ        |
| <b>  </b>  | 49         | $\vdash$ |                 | _ | Щ        |  | <u> </u>     | Щ  | $\Box$          | _        |          |              | 99       | 4               | _        |                 | _        |          |          | $\dashv$ | $\perp$  | 4        | $\perp \perp$ | 149      |          | _        |                      | Ш               |          |          |          |          | $\Box$   |
|  | 50         |          |                 |   |          | L_   |              | L.,  |                 |          | L        |              | 100      |                 |          |                 |          |          |          |          | L        | J        | L             | 150      |          |          |                      |                 |          |          |          |          |          |